DEFOGGER - MIRROR & REAR WINDOW 1997 ACCESSORIES/SAFETY EQUIP General Motors Corp. - Rear Window & Mirror Defoggers

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DESCRIPTION & OPERATION

Rear window defogger system consists of rear window defogger switch on instrument panel, timer relay, rear defogger grid and heated mirrors (if equipped). Timer relay is incorporated in rear window defogger switch, located on left side of instrument panel. Grid is bonded to inside surface of rear window. Current enters grid on left side and is grounded on right side of cab.

Ignition switch must be on to operate system rear window defogger system. When rear window defogger switch is pressed, timer relay allows current to flow to grid for 10 minutes, then stops current flow to grid. Each time rear window defogger switch is activated after initially activation, timer relay will allow current flow to grid for 5 minutes. If ignition switch is turned off then back on, timer relay resets to 10-minute cycle. Any time rear window defogger switch or ignition switch is turned off, current stops flowing to grid.

ON-VEHICLE SERVICE

GRID FILAMENT REPAIR

- 1. Turn system off. Disconnect negative battery cable. Gently clean area to be repaired with steel wool. Wipe area clean with denatured alcohol. Be sure to clean 1/4" (6 mm) beyond each side of break.
- 2. With glass at room temperature of 70-90°F (20-32°C), position masking tape along both side of grid line at damaged area. See **Fig. 1**. Apply grid repair material to grid and remove masking tape. Holding heat gun 1-2" (25-50 mm) from repair area, apply heat at 500-700°F (260-370°C) for 2-3 minutes. If heat gun is not available, allow repair area to air dry for at least 24 hours.
- 3. Test defogger operation to verify repair. If repair appears discolored, apply a coating of tincture of iodine. Allow iodine to dry for 30 seconds and carefully wipe off excess.

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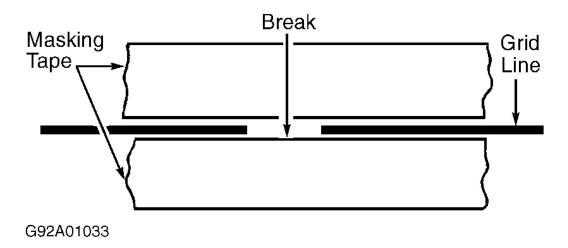


Fig. 1: Repairing Grid Line

TESTING

NOTE:

Before testing, ensure fuses and circuit breakers are okay and ground connections are clean and tight. Leave electrical connectors attached and backprobe terminals unless specified otherwise. For references to connectors and terminals see appropriate wiring diagram. See WIRING DIAGRAMS.

GRID FILAMENT TEST

- 1. Start engine. Turn defogger system on. Ground test light and lightly probe each grid line. Move test light from feed wire side of grid to ground side. See <u>Fig. 2</u>.
- 2. Test light should gradually dim as it is moved across grid. Be sure to check each grid in at least 2 places to avoid the possibility of bridging a gap with test light.
- 3. If test light shows full brilliance at both ends of grid, check for loose ground wire contact at cab body. If test light goes out as it is moved across grid, a break has been detected. Use a grease pencil to mark break (s) on outside of window. Go to **GRID FILAMENT REPAIR** under ON-VEHICLE SERVICE.

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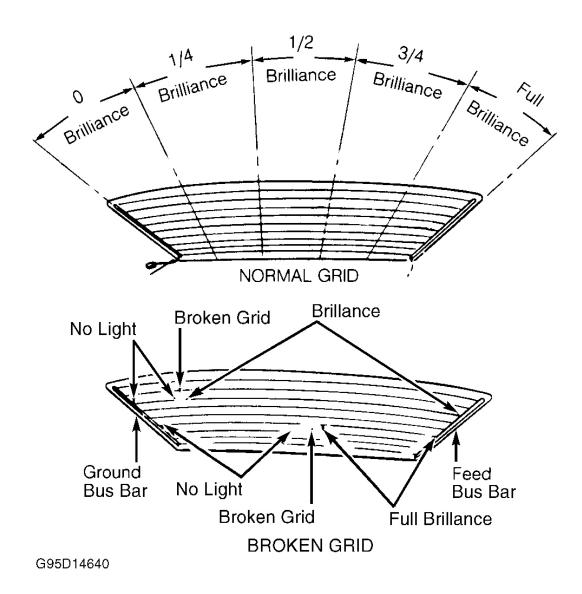


Fig. 2: Examining Grid Brilliance Test Patterns (Typical) Courtesy of GENERAL MOTORS CORP.

REAR WINDOW DEFOGGER

Indicator Illuminates, But Rear Window Does Not Clear

- 1. Connect test light between ground and rear window defogger switch terminal "A" (Orange wire). If test light illuminates, go to next step. If test light does not illuminate, repair open in Orange wire between rear window defogger switch and instrument panel fuse block.
- 2. Turn rear window defogger switch on. Connect test light between ground and rear window defogger switch terminal "B" (Purple wire). If test light illuminates, go to next step. If test light does not illuminate, replace rear window defogger switch.

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- 3. Connect test light between ground and connector C432 (body harness-to-rear defogger grid pigtail) terminal "A" (Purple wire). If test light illuminates, go to next step. If test light does not illuminate, repair open in Purple wire between connector C432 and rear window defogger switch.
- 4. Connect test light between connector C432 terminal "A" (Purple wire) and connector C433 (body harness-to-rear defogger grid pigtail) terminal "A" (Black wire). If test light illuminates, repair rear defogger grid as necessary. If test light does not illuminate, repair open in Black wire between connector C433 and ground.

Rear Window Defogger Does Not Operate

- 1. Turn ignition on. Connect test light between ground and rear window defogger switch terminal "E" (Pink wire). If test light illuminates, go to next step. If test light does not illuminate, repair open in Pink wire between rear window defogger switch and instrument panel fuse block.
- 2. Connect test light between rear window defogger switch terminals "E" (Pink wire) and "D" (Black wire). If test light illuminates, go to next step. If test light does not illuminate, repair open in Black wire between rear window defogger switch and ground.
- 3. Connect test light between ground and rear window defogger switch terminal "A" (Orange wire). If test light illuminates, go to next step. If test light does not illuminate, repair open in Orange wire between rear window defogger switch and instrument panel fuse block.
- 4. Turn rear window defogger switch on. Connect test light between ground and rear window defogger switch terminal "B" (Purple wire). If test light illuminates, go to next step. If test light does not illuminate, replace rear window defogger switch.
- 5. Connect test light between ground and connector C432 (body harness-to-rear defogger grid pigtail) terminal "A" (Purple wire). If test light illuminates, go to next step. If test light does not illuminate, repair open in Purple wire between connector C432 and rear window defogger switch.
- 6. Connect test light between connector C432 terminal "A" (Purple wire) and connector C433 (body harness-to-rear defogger grid pigtail) terminal "A" (Black wire). If test light illuminates, repair rear defogger grid as necessary. If test light does not illuminate, repair open in Black wire between connector C433 and ground.

Indicator Inoperative

Turn headlights on. Turn dimmer control to full intensity. Connect test light between ground and rear window defogger switch terminal "C" (Gray wire). If test light illuminates, replace indicator bulb. If test light does not illuminate, repair open in Gray wire between rear window defogger switch and instrument panel fuse block.

REMOVAL & INSTALLATION

WARNING: Before servicing instrument panel components on vehicles with Supplemental Inflatable Restraint (SIR) system, disable SIR system. See DISABLING & ACTIVATING AIR BAG SYSTEM in AIR BAG RESTRAINT SYSTEM article.

NOTE: For removal and installation procedures for mirrors, see <u>MIRRORS - POWER</u> article.

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A/C-HEATER CONTROL

Removal & Installation

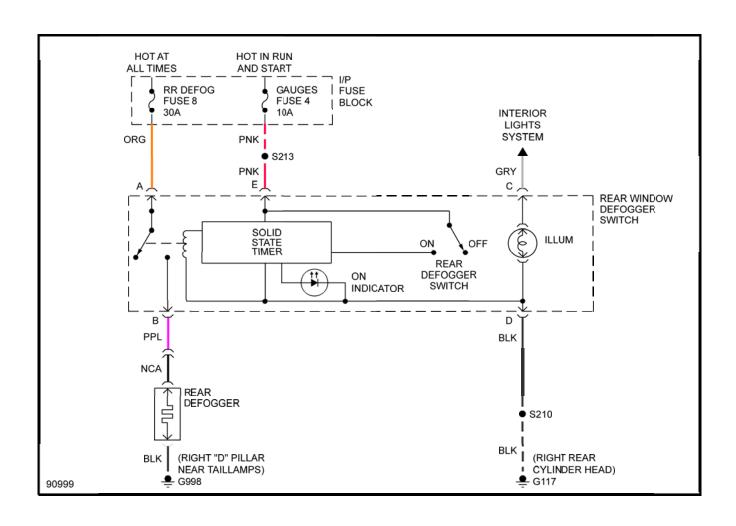
Disconnect negative battery cable. Remove instrument panel trim panel. Remove A/C-heater control mounting screws. Disconnect electrical and vacuum harnesses. Remove A/C-heater control from vehicle. To install, reverse removal procedure.

WIRING DIAGRAMS

NOTE: For pickup models, see SYSTEM WIRING DIAGRAMS article in WIRING

DIAGRAMS section.

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Fig. 3: Rear Window Defogger System Wiring Diagram (Blazer, Bravada & Jimmy)